

PHD Program

Program structure:

a. Program duration (years):

PhD degree duration at least 3 years and it should not exceed a period of 5 years, an extension could be approved by the faculty council depending on the supervisor report that approved by the department council and postgraduate and research committee refers to the universities regulation law (article 18).

b. Program courses:

Pre-doctor study

In which student should study 2-5 courses of the postgraduates stated in article (28) in regulation law list, not exceed 10-12 theoretical and practical hours weekly for 12 months. These courses are selected by the department council should include at least 4 hours from subsidiary courses and approved by postgraduate and research committee and faculty council. These courses must not be previously studied in the Mater program. The student will entitled to apply for the exam only after meeting attendance rate for each courses. The student should pass written, practical and oral exams successfully in all courses, and the examination is held two times annually.

c- Qualifying examination

The applicant should pass a qualifying examination in which the student is examined for his ability to solve and face scientific problems and judge the advancement in his research work.

d- Scientific thesis

The applicant should conduct an innovate research on the subject that has been registered for at least 2 years from the date of registration approved by the faculty council. And the faculty council depending on a request

from the supervisor that has the right to authorize the student to do scientific experiments at recognized scientific institute. The applicant should submit the thesis that accepted by the judging committee in an open discussion

Courses to be studied during pre-detector year

1. Principle courses

One or more of PhD principle courses so that not exceed 8 hrs must be studied during pre-doctor academic year. The principle courses for PhD in include:

Subject	Code	Course title	No of hours/week	
			Lecture	Practical Lab
Anatomy and embryology	101/2	1- Applied anatomy	2	2
	102/2	2- Anatomical techniques and surface anatomy	2	2
	103/2	3- Osteology and arthrology	2	2
	104/2	4- Comparative digestive system	2	2
	105/2	5- Comparative uro-genital system	2	2
	106/2	6-Comparative respiratory system	2	2
	107/2	7- Comparative cardiovascular system	2	2
	108/2	8- Comparative nervous system and endocrine glands	2	2
	109/2	9- General and special embryology	2	2
	110/2	10- Avian anatomy	1	2
Histology	111/2	11- cytology and cytochemistry	1	2
	112/2	12- general histology	2	2
	113/2	13- Histology and	1	1

		histochemistry of blood, lymph and cardiovascular system.		
	114/2	14- Comparative histology and histochemistry of body muscles, heart and blood vessels	1	1
	115/2	15- Comparative histology and histochemistry of respiratory system	1	1
	116/2	16-Comparative histology and histochemistry of digestive system	2	2
	117/2	17- Comparative histology and histochemistry of uro-genital system	2	2
	118/2	18- Comparative histology and histochemistry of nervous and endocrine systems	2	2
	119/2	19- Histology and histochemistry of special sensors	1	2
	120/2	20-Histology and histochemistry of skin, hooves, claws and Nails	2	2
	121/2	21- Avian histology	2	2
	122/2	22- Fish histology	1	2
Physiology	123/2	23- Physiology of mammalian endocrine and reproduction	2	2
	124/2	24- poultry physiology (advanced)	2	2
	125/2	25- physiology of muscle and nerve	1	2
	126/2	26- physiology of ruminants	2	2
	127/2	27- physiology of environment, adaptation and cell	2	2

	128/2	28- physiology of blood	2	2
	129/2	29- physiology of digestion, metabolism and energy	2	2
	130/2	30- Physiology in pollution	1	2
	131/2	31- Radioactive isotopes and biological uses	2	2
	132/2	32– Physiology of heights	1	1
	133/2	33-Fish physiology.	1	2
Biochemistry	134/2	34- Basics of biochemistry	2	3
	135/2	35- Metabolism	2	2
	136/2	36- Biochemistry of tissue and body fluids .	2	2
	137/2	37- Biochemistry of hormones and reproduction	2	2
	138/2	38- Feeding biochemistry	2	2
	139/2	39- Clinical biochemistry	2	2
	140/2	40- Avian biochemistry	2	2
	141/2	41- Microbial biochemistry	2	2
	142/2	42- Biochemistry of radiation	1	2
	143/2	43- Fish biochemistry		
Animal behavior and management	144/2	44- Behavior and management of ruminants (specific courses in cattle, buffalo, sheep, camels and goats)	2	3
	145/2	45- Behavior and management of horses	2	3
	146/2	46- Behavior and management of pet animals	1	2
	147/2	47- Behavior and management of laboratory animals	1	2
	148/2	48- Behavior and management of wild	2	2

		animals		
	149/2	49- Behavior and management of poultry	2	2
	150/2	50- Behavior and management of rabbit	1	2
	151/2	51- Behavior of experimental animals	1	2
Nutrition and clinical nutrition	152/2	52- Basics of animal nutrition	2	2
	153/2	53- feedstuff	2	2
	154/2	54- nutrition of farm animals and fish specific courses in (cattle and buffalo nutrition – sheep and goat nutrition – camel nutrition- equine nutrition – fish nutrition)	2	2
	155/2	55- poultry and rabbit nutrition(advanced)	2	2
	156/2	56- wild animal nutrition	1	2
	157/2	57- laboratory animal nutrition	1	2
	158/2	58- feed additives	1	2
	159/2	59- feedstuff analysis	2	2
	160/2	60- Quality control of feed and feed factories	2	2
	161/2	61- Clinical nutrition and malnutrition	2	2
	162/2	62- Fish nutrition	1	2
Pathology	163/2	63- General pathology and neoplasm(progressive)	2	2
	164/2	64-pathology of microbial and parasitic diseases in animal	2	2
	165/2	65- pathology of bad nutrition	1	2
	166/2	66- pathology of environmental pollution	1	2
	167/2	67- pathology of reproductive diseases	1	2

	168/2	68- Avian pathology	2	2
	169/2	69-Experimental pathology	2	2
	170/2	70- toxins pathology	2	2
	171/2	71- surgical pathology	2	2
	172/2	72- Pathology of experimental animals.		
	173/2	73- Pathology of genetics		
	174/2	74-- Fish pathology	2	2
Clinical pathology	175/2	75- Advanced clinical pathology	2	2
	176/2	76-Organ function tests and body and urine balance	2	2
	177/2	77- Clinical hematology and bone marrow examination	1	2
Bacteriology, immunology and mycology	178/2	78- General bacteriology(advanced)	1	2
	179/2	79-systemic bacteriology	2	3
	182/2	80- Advanced immunology	2	2
	183/2	81- Advanced mycology	1	2
Virology	180/2	82- General virology	1	2
	181/2	83-Systemic virology(specific courses)	2	3
	182/2	84- Advanced immunology	2	2
Mixed courses between Bacteriology and Virology	184/2	85- Microbiology of poultry	2	2
	185/2	86- Microbiology of ??????	1	2
	186/2	87- Microbiology of animal product	2	2
	187/2	88- Fish Microbiology	1	2
81- Advanced immunology			2	2
Parasitology	188/1	89- Veterinary medical entomology and acarology	2	2
	189/2	90-helminthology	2	2
	190/2	91- protozoology	2	2
	191/2	92- Avian and rabbits parasitology	2	2
	192/2	93Malacology and its vet.	1	2

		Importance		
	193/2	94- parasitic Immunology	1	2
	194/2	95- Clinical parasitology	2	2
	195/2	96-Wild life parasitology	1	2
	196/2	97-Special vet. Parasitology	2	2
	197/2	98- Physiology and biochemistry of parasites	2	2
	198/2	99- Fish parasitology	1	2
Pharmacology	199/2	100- Aeneral pharmacology (advanced)	2	2
	200/2	101- pharmacology of autonomic nervous system and autocoid	2	2
	201/2	102- pharmacology of central nervous system	2	2
	202/2	103 pharmacology of anesthesia	2	2
	203/2	104- Systemic pharmacology	2	2
	204/2	105- pharmacology of metabolism	2	2
	205/2	106- pharmacology of hormones	2	2
	206/2	107-Chemotherapy	2	2
	207/2	108-Biological evolution of drug	1	1
Hygiene and control of milk and dairy products	208/2	108- Hygienic control of milk and dairy products	2	2
	209/2	109- Microbiology of milk and dairy products	2	2
	210/2	110- Milk technology and preservation	2	2
	211/2	111- Food analysis	2	2
	212/2	112- Food poisoning	1	2
	213/2	113- Specific courses on sources of contamination, disturbances of milk production, milk born diseases, hygiene of table	1	1

		egg, edible fats and oils		
	214/2	114- The sanitation of dairy plant	2	2
Control of meat hygiene and their products	215/2	115- Slaughter animal Hygiene	1	2
	216/2	116- Abattoir management and hygiene	2	2
	217/2	117- Hygienic control of meat and their product	2	2
	218/2	118 inspection of poultry meat.	1	2
	219/2	119- Food technology	1	2
	220/2	120- Microbiology of meat and fish meats and their product	2	1
	221/2	121- Chilled meal microbiology	1	2
	222/2	122- Analysis of meat and fish and their product	1	2
	223/2	123- Preservation of meat, poultry, fish and their products	1	2
	224/2	124- Sanitation affairs of meat and fish plants.	2	2
Internal medicine	225/2	125- advanced general medicine	2	2
	226/2	126- disease of ruminants(cattle, buffalo, camels, sheep and goats)	3	3
	227/2	127- diseases of equines	2	2
	228/2	128 diseases of pet animals	2	2
	229/2	129- diseases of wild animals	2	2
	230/2	130- diseases of metabolic disorders	2	2
	231/2	131- nutritional deficiency diseases	2	2
	232/2	132- Skin diseases	1	2
	233/2	133 - diseases of newly born animals	2	2

	234/ 2	134- Stress diseases during animals transport.		
Infectious diseases	235/ 2	135- Infectious diseases of cattle	2	2
	236/ 2	136- Infectious diseases of sheep and goat	2	2
	237/ 2	137- Infectious diseases camel	2	2
	238/ 2	138 Infectious diseases of equine	2	2
	239/ 2	139- Infectious diseases of pet animals	2	2
	240/ 2	140- Infectious diseases lab animals	1	2
	241/ 2	141- Infectious diseases of udder and newly born animals	2	2
	242/ 2	142- Infectious diseases buffaloes	2	1
	243/2	143- Infectious diseases of wild animals.		
Forensic medicine and toxicology	244/2	144- Forensic medicine and veterinary procedures	2	2
	245/2	145- general toxicology	2	2
	246/2	146- environmental toxicology	2	2
	247/2	147- forensic toxicology	2	2
	248/2	148- laboratory diagnostic toxicology	2	2
	249/2	149- Drug toxicology		
Theriogenology	250/2	150- Female infertility (special specific courses in ruminants- equine- pet animals)	2	2
	251/2	151- Male infertility (special specific courses in ruminants- equine- pet animals)	2	2
	252/2	152- Genital diseases.	1	1

	253/2	153 - obstetrics (special specific courses in farm and pet Animals)	2	2
	254/2	153- reproduction and immunity	1	2
	255/2	155- artificial insemination in ruminants	2	2
	256/2	156- artificial insemination in equine	2	2
	257/2	157- artificial insemination in pet animals	1	2
	258/2	158- embryo transfer	1	2
Veterinary Surgery	259/2	159- General surgery (advanced)	2	2
	260/2	160- Special surgery(organs)	2	3
	261/2	161- surgery of eye, ear, nose and larynx	2	2
	262/2	162 digestive system surgery	2	2
	263/2	163- surgery of the limbs, hoof and claws	2	2
	264/2	164- experimental surgery	2	2
	265/2	165- anesthesiology	1	1
	266/2	166- radiology and ultrasonography	2	2
Poultry and rabbit diseases	267/2	167- bacterial diseases of poultry	2	2
	268/2	168- viral diseases of poultry	2	2
	269/2	169- fungal diseases of poultry	2	2
	270/2	170 parasitic diseases of poultry	1	2
	271/2	171 - nutritional diseases of poultry	1	2
	272/2	172-diseases of rabbit (advanced)	2	2
	273/2	173-Diseases of wild and	2	2

		migrating birds		
	274/2	174- Preventive vaccines and their evaluation in poultry	2	2
	275/2	175- Laboratory diagnosis of poultry diseases.		
Animal and environmental hygiene	276/2	176- farm animal hygiene (advanced)	2	2
	277/2	177- poultry hygiene (advanced)	2	2
	278/2	178- environmental hygiene and pollution	2	2
	279/2	179- control of contagious diseases	2	2
	280/2	180- eradication of rodents and disease vector	2	2
	281/2	181- insecticides and public health	2	2
	282/2	182-hygiene of animal enclosures- specific courses in :- cattle houses – poultry houses – rabbit houses- pet animals house3s – experimental animals houses	2	2
	283/2	183-disinfections and disinfectants	2	2
	284/2	184- veterinary epidemiology – specific courses in animal environment	2	-
Zoonoses	285/2	185- advanced zoonoses (specific courses in bacterial and Mycotic diseases – viral diseases – parasitic diseases)	2	2
	286/2	186- role of rodents in transmission of zoonoses	2	2
	287/2	187- role of wild animals in transmission of zoonoses	2	2

	288/2	188- role of birds (special courses in: poultry, wild migrating or pets) in transmission of zoonoses		
Genetics and genetic engineering	289/2	189- Genetics of microorganisms .	1	2
	290/2	190- Genetic engineering(advanced)	1	2
	291/2	191- Cytological genetics	1	-
	292/2	192- Genetics of genuses.	2	-
	293/2	193- physiological genetics	2	-
	294/2	194- Chemical and radiological genetics.	1	2
Animal Production	295/2	195- Animal breeding and improvement (advanced).	2	-
	296/2	196- Poultry breeding and improvement (advanced).	2	-
	297/2	197- Cattle and buffalo production (advanced).	2	2
	298/2	198- Sheep and goat production (advanced).	2	2
	299/2	199- Poultry production (advanced).	2	2
	300/2	200-Rabbit production (advanced).	2	2
	301/2	201-Improving by artificial insemination in poultry and rabbits.	2	2
Fish diseases and management	302/2	202- Biology of fish.	2	2
	303/2	203-Fish diseases (advanced)	2	2
	304/2	204-Fish farms.	1	2
	305/2	205-Fish breeding .	2	2
Economic and farms management	306/2	206- economics of animals and dairy production	2	-
	307/2	207- economics of poultry farms	2	-
	308/2	208-economics of fish	2	-

		farms		
	309/2	209- feasibility studies	2	-
	310/2	210- farm management	2	-
	311/2	211- economics of beef production	2	-
Biostatistics	312/2	212- Biostatistics (advanced)	2	-
	313/2	213- Experimental design	2	2
	314/2	214- Computer and data processing	2	1